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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

*Ex parte* KOICHI HAGIWARA and JIRO WATANABE

Appeal 2008-002132  
Application 10/006,568  
Technology Center 3700

Decided: August 18, 2009

Before JENNIFER D. BAHR, STEVEN D.A. McCARTHY, and  
FRED A. SILVERBERG, *Administrative Patent Judges*.

SILVERBERG, *Administrative Patent Judge.*

## DECISION ON APPEAL

## STATEMENT OF THE CASE

Having had claims twice rejected, Koichi Hagiwara et al. (Appellants) seek our review under 35 U.S.C. § 134 of the rejection of claims 1, 3, 4, 6, 7, 14 and 15. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

## SUMMARY OF DECISION

2 We REVERSE.

## THE INVENTION

5 The Appellants' claimed invention is directed to the spraying from an  
6 injection nozzle of a mixture of a pressurized gas, a pressurized liquid and a  
7 granular material onto an object to be cleaned (Spec. 1, 7: ¶¶ [0001] and  
8 [0007]).

9                   Claim 1, reproduced below, is representative of the subject matter on  
10                   appeal.

11        1. A cleaning and releasing device for spraying  
12        a jet flow onto an object to be cleaned, comprising:

13 an injection nozzle which mixes a  
14 pressurized liquid and a pressurized gas in said  
15 injection nozzle and injects the pressurized liquid  
16 and the pressurized gas;

17 a pressurized liquid flow passage for  
18 supplying the pressurized liquid to said injection  
19 nozzle;

20 a pressurized gas flow passage for supplying  
21 the pressurized gas to said injection nozzle;

22 operating means for supplying and stopping  
23 the pressurized liquid to said injection nozzle, said  
24 operating means being provided in said injection  
25 nozzle or on the flow passage of the pressurized  
26 liquid in communication with said injection  
27 nozzle;

33 a switching valve provided in the flow  
34 passage of the pressurized gas and serving to

1                    supply and stop the pressurized gas to said  
2                    injection nozzle; and

3                    a controller for controlling a switching  
4                    operation of said switching valve based on a  
5                    detection signal transmitted from the detecting  
6                    means;

7                    wherein the controller opens said switching  
8                    valve based on a detection signal transmitted from  
9                    the detecting means so as to supply the pressurized  
10                  gas to said injection nozzle when the injection of  
11                  the pressurized liquid from said injection nozzle is  
12                  detected by said detecting means; and

13                  wherein the controller closes said switching  
14                  valve based on a detection signal transmitted from  
15                  the detecting means so as to stop the supply of the  
16                  pressurized gas to said injection nozzle when the  
17                  stop of the injection of the pressurized liquid from  
18                  said injection nozzle is detected by said detecting  
19                  means.

20

## 21                    THE REJECTIONS

22                  The Examiner relies upon the following as evidence of  
23                  unpatentability:

24                  Woodward                    US 5,312,040                    May 17, 1984

25

26                  The following rejections by the Examiner are before us for review:

27                  1. Claims 7 and 15 are rejected under 35 U.S.C. § 112, second  
28                  paragraph, as being indefinite for failing to particularly point out and  
29                  distinctly claim the subject matter which applicants regard as the  
30                  invention.

31                  2. Claims 1, 3, 4, 6, 7 and 14 are rejected under 35 U.S.C. § 102(b) as  
32                  being anticipated by Woodward.

1

## ISSUES

2        The issues before us are whether: (1) the Examiner erred in  
3        concluding that there is a structural gap in claims 7 and 15 that renders these  
4        claims indefinite (App. Br. 12); and (2) the Examiner erred in finding that  
5        Woodward describes an injection nozzle that mixes a pressurized liquid and  
6        a pressurized gas as called for in independent claims 1 and 6 (App. Br. 15).

7

8

## ANALYSIS

### *Rejection of claims 7 and 15 under 35 U.S.C. § 112*

10       Appellants contend that claims 7 and 15 meet the requirements of 35  
11       U.S.C. § 112 for definiteness (App. Br. 12). Appellants further contend that  
12       whether a claim is distinguishable from the prior art is not relevant to  
13       whether the claim satisfies the requirements of 35 U.S.C. § 112 (App. Br.  
14       14).

15       The Examiner found that claims 7 and 15 contain functional  
16       limitations that are not commensurate in scope with the structural limitations  
17       claimed (Ans. 3, 8). The Examiner further found that “[w]hile features of an  
18       apparatus may be recited structurally or functionally, claims directed to an  
19       apparatus must be distinguished from the prior art in terms of structure  
20       rather than function.” (Ans. 3, 9).

21       We agree with Appellants that whether a claim is distinguishable from  
22       the prior art is not relevant as to whether the claim satisfies the requirements  
23       of 35 U.S.C. § 112.

24       The Examiner’s position, as we understand it, is that there is a  
25       structural gap in claims 7 and 15, because they do not recite the specific  
26       structure by means of which the controller controls the supply and stop of  
27       the pressurized gas. It appears that the Examiner may be confusing claim

1 breadth with indefiniteness. A claim that is broad does not mean that it is  
2 indefinite, that is, undue breadth is not indefiniteness. *In re Johnson*, 558  
3 F.2d 1008, 1016 n.17 (CCPA 1977).

4 We find that a person having ordinary skill in the art would  
5 understand the subject matter called for in claims 7 and 15. We agree with  
6 Appellants that claims 7 and 15 meet the requirements of 35 U.S.C. § 112  
7 for definiteness. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d  
8 1565, 1576 (Fed. Cir. 1986) (holding that the test for definiteness under 35  
9 U.S.C. § 112, second paragraph, is whether “those skilled in the art would  
10 understand what is claimed when the claim is read in light of the  
11 specification.”).

12 We thus conclude that the Examiner erred in rejecting claims 7 and 15  
13 under 35 U.S.C. § 112, second paragraph, as being indefinite.

14  
15 *Rejection of claims 1, 3, 4, 6, 7 and 14 under 35 U.S.C. § 102(b) as being*  
16 *anticipated by Woodward*

17 Appellants contend that Woodward does not describe a device which  
18 mixes a pressurized liquid and a pressurized gas, as Woodward is directed to  
19 a device which supplies either a pressurized liquid or a pressurized gas (App.  
20 Br. 15). Appellants further contend that Woodward supplies pressurized gas  
21 61 to the nozzle 118 only in response to the pressurized liquid being diverted  
22 away from the nozzle 118 to the dump 120 (App. Br. 16). Appellants still  
23 further contend that Woodward does not describe the invention as called for  
24 in claim 1 (App. Br. 16). Appellants still further contend that in Woodward,  
25 (1) the residual liquid moisture referred to in column 7, lines 19-24 is liquid  
26 that is left over after the pressurized liquid is diverted away from nozzle 118,  
27 (2) that whatever residual moisture remained is not a pressurized liquid, and

1 (3) mixture of the residual moisture and the gas is not a mixture of a  
2 pressurized liquid and a pressurized gas (App. Br. 20).

3       The Examiner found that Woodward (1) describes the structural  
4 limitations called for in claim 1, and (2) has the ability to perform the  
5 function of mixing a pressurized liquid and a pressurized gas in the injection  
6 nozzle (Ans. 9). The Examiner further found that one of ordinary skill in the  
7 art guided by the teachings in Woodward would recognize that a pump  
8 malfunction while water is flowing through barrel 116 which resulted in a  
9 pressure of 500 psi would actuate valve 14 to open inlet 22 and allow  
10 pressurized gas to flow into barrel 116 resulting in a mixture of pressurized  
11 water and pressurized gas (Ans. 9-10).

12       The ordinary meaning of the word “pressurize” includes “to put (gas  
13 or liquid) under a greater than normal pressure.” THE AMERICAN  
14 HERITAGE® DICTIONARY OF THE ENGLISH LANGUAGE (4<sup>th</sup> ed. 2000).

15       We find that normal pressure is atmospheric pressure.

16       In order for a fluid or liquid to be pressurized, it must be of greater  
17 than normal pressure, that is, greater than atmospheric pressure.

18       Woodward describes that when the jetting is interrupted, that is, when  
19 the high pressure fluid stream 33 is directed to the nozzle dump 120, only  
20 compressed gas 60 and some residual moisture from the diverted high  
21 pressure fluid stream 33 is present in the nozzle 118 (col. 7, ll. 1-24; fig. 4).  
22 Therefore, Woodward describes that the compressed gas 60 flows only in  
23 the absence of the flow of high pressure fluid stream 33.

24       In Woodward, while the fluid is initially of high pressure, any residual  
25 moisture present in the nozzle 118 would not retain that high pressure, that

1 is, the residual moisture would not be under greater than normal pressure.

2 Therefore, the residual moisture would not be pressurized.

3 Therefore, we agree with Appellants that in Woodward, a mixture of  
4 the residual moisture and the gas is not a mixture of a pressurized liquid and  
5 a pressurized gas.

6 Further, in Woodward, it is speculative, at best, as to whether any high  
7 pressure fluid would still be in the nozzle when the compressed gas flows  
8 through the nozzle 118 during a pump malfunction.

9 Therefore, since Woodward describes that the compressed gas flows  
10 only in the absence of the flow of high pressure fluid, the Examiner has  
11 erred in finding that Woodward has the ability to mix a pressurized liquid  
12 and a pressurized gas in the injection nozzle.

13 Accordingly, Woodward does not anticipate claims 1 and 6. For the  
14 same reasons, Reed does not anticipate claims 3, 4, 7 and 14, which depend  
15 from claims 1 and 6, respectively.

16  
17 CONCLUSIONS OF LAW

18 Appellants have established that the Examiner erred in concluding  
19 that claims 7 and 15 were indefinite. Appellants have established that the  
20 Examiner erred in finding that Woodward describes an injection nozzle that  
21 mixes a pressurized liquid and a pressurized gas as called for in claims 1 and  
22 6.

23  
24 DECISION

25 The decision of the Examiner to reject claims 7 and 15 under 35  
26 U.S.C. § 112, and claims 1, 3, 4, 6, 7 and 14 under 35 U.S.C. § 102(b) over  
27 Woodward is reversed.

Appeal 2008-002132  
Application 10/006,568

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REVERSED

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